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COMMENT ON COLONEL CLOSE'S ADDRESS ON THE PURPOSE AND POSITION OF GEOGRAPHY

BY

MARTHA KRUG GENTHE, PH.D.

In his presidential address to the geographical section of the British Association on "The Purpose and Position of Geography," which has been published in several geographical periodicals, including this *Bulletin* (Vol. 43, 1911, No. 10, pp. 740-753), Colonel Close has come to the conclusion that geography is not "a unit of science," at least not "in the sense in which geology, astronomy, or chemistry are units," and he substantiates this assertion mainly by an examination of the original contributions to the *Geographical Journal* during the last five years.

When Colonel Close says that the work of the leading British geographical society is "mainly an affair of exploration and surveys" and that the authors who submit their work to it "in so doing appeal rather to the public at large than to men of their own special sciences," because that society serves only "as a popularizing medium," we must leave to him the full responsibility for such a statement. Whatever its validity, however, in so far as it concerns geography in England, it does not follow that conditions must be the same all over the world. Such a sweeping generalization would not hold in any science, and does not in geography.

In order to make possible a fair criticism of the author's statements I shall not at first take exception to his method, but will apply that method to test corresponding conditions on the Continent and in the United States. Choosing for comparison the last five volumes of the *Zeitschrift der Gesellschaft für Erdkunde zu Berlin,* for instance, I find that, of 107 original papers, 27, or 25.2 per cent., deal with travel and exploration, and 20, or 18.7 per cent., with general physical geography. The complete list for the respective sections, following Colonel Close's numeration, is as follows (the figures in parentheses indicating the percentages for the *Geographical Journal*):

CLASSIFICATION OF ORIGINAL PAPERS IN THE ZEITSCHRIFT DER GESELLSCHAFT FÜR ERDKUNDE ZU BERLIN, 1906-1910.

SECTION	SUBJECT	PERCENTAGE	
1	Mathematical and Cartographical Geography............	12.0	(3)
2	General Physical Geography............................	18.7	(10)
3	Vulcanology and Seismology	7.4	(5)

SECTION	SUBJECT	PERCENTAGE	
4	Glaciers	6.7	(3)
5	Hydrography (Potamography and Limnology)	2.8	(5)
6	Oceanography	3.7	(3)
7	Meteorology and Climatology. Terrestrial Magnetism	3.7	(3)
8	Biological Geography	0.9	(1)
9	Anthropology and Ethnography	3.7	(3)
10	Economic and Social Geography	3.7	(7)
11	Explorations	25.2	(57)
[12]	Systematic Regional Geography	11.2	—

A twelfth section has been added to the original eleven sections of Colonel Close's classification, viz.: systematic regional geography [*Länderkunde*]. (It is illuminating to note in connection with the validity as a criterion of the classificaton adopted by geographical congresses, to be discussed later, that this, the ultimate goal of modern scientific geography, is not represented in Colonel Close's list). From the above table it is obvious that travel and exploration hold much less commanding a position in the work of the Berlin society than they do in that of the Royal Geographical Society.

The difference is even more marked when we classify these papers according to whether they were presented originally as addresses at the meetings of the society or as direct contributions to its journal. A separate calculation of the percentages for each group resulted in the following table:

DIVISION OF ABOVE PAPERS INTO ADDRESSES AND DIRECT CONTRIBUTIONS

SECTION	ADDRESSES	DIRECT CONTRIBUTIONS
1	4%	19.3%
2	22	16.0
3	2	12.3
4	2	10.5
5	4	1.7
6	4	3.5
7	0	7.0
8	0	1.7
9	2	5.2
10	6	1.7
11	40	12.3
[12]	14	8.8

We see from these figures that in the addresses the percentage of explorations exceeds that of the other groups almost, though not quite, as much as it does in Colonel Close's list, while the direct contributions show a much more even distribution of the individual subject. We shall later inquire into the meaning of this difference; suffice it now to state the fact.

In order to obtain a broader basis for the conclusions which might be derived from these figures, I collected additional material from leading geographical periodicals of Germany, France and the United States. Instead of computing, however, the contents of five years of one journal, I took one year each of five journals whose scientific standard is universally recognized: *Petermanns Mitteilungen, Geographische Zeitschrift, Annales de Géographie, La Géographie, Bulletin of the American Geographical Society.* The respective figures, arranged in accordance with Colonel Close's scheme, are as follows:

CLASSIFICATION OF ORIGINAL PAPERS IN ONE YEAR EACH OF FIVE GEOGRAPHICAL PERIODICALS.

SUBJECT.	*Petermanns Mitteilungen.*		*Geographische Zeitschrift.*		*Annales de Géographie.*	
	NUMBER OF PAPERS.	PER-CENTAGE.	NUMBER OF PAPERS.	PER-CENTAGE.	NUMBER OF PAPERS.	PER-CENTAGE.
Mathematical and Cartographical Geography	7	17.0	3	9.0	2	10.5
General Physical Geography	5	11.9	5	15.1	6	31.5
Vulcanology and Seismology	1	2.4	2	6.0	0	0.0
Glaciers	0	0.0	4	12.1	4	21.0
Hydrography (Potamography and Limnology)	2	4.8	1	3.0	2	10.5
Oceanography	0	0.0	0	0.0	0	0.0
Meteorology and Climatology. Terrestrial Magnetism	0	0.0	5	15.1	1	5.2
Biological Geography	3	7.0	1	3.0	0	0.0
Anthropology and Ethnography	4	9.4	0	0.0	1	5.2
Economic and Social Geography	7	17.0	5	15.1	2	10.5
Explorations	11	26.1	2	6.0	0	0.0
Systematic Regional Geography	2	4.8	5	15.1	1	5.2
Totals	42		33		19	

SUBJECT.	*La Géographie.*		*Bull. Amer. Geogr. Soc.*		TOTAL NUMBER OF PAPERS.	AVERAGE PERCENTAGE.
	NUMBER OF PAPERS.	PER-CENTAGE.	NUMBER OF PAPERS.	PER-CENTAGE.		
Mathematical and Cartographical Geography	3	9.7	3	7.0	18	10.6
General Physical Geography	5	16.1	7	16.3	28	16.6
Vulcanology and Seismology	1	3.2	1	2.3	5	3.0
Glaciers	0	0.0	3	7.0	11	6.5
Hydrography (Potamography and Limnology)	2	6.4	0	0.0	7	4.5
Oceanography	0	0.0	1	2.3	1	0.6
Meteorology and Climatology. Terrestrial Magnetism	0	0.0	0	0.0	6	3.5
Biological Geography	2	6.4	0	0.0	6	3.5
Anthropology and Ethnography	2	6.4	6	14.0	13	7.7
Economic and Social Geography	4	12.9	11	25.8	20	17.2
Explorations	7	22.6	10	23.2	30	18.0
Systematic Regional Geography	5	16.1	1	2.3	14	8.3
Totals	31		43		168	

"The main conclusion" here, too, "is obvious enough": for the leading geographical periodicals of Germany, France and the United States, geography is *not* mainly an affair of exploration and surveys, although the list includes the classical organ of the great explorers of the second half of the nineteenth century, *Petermanns Mitteilungen.* Explorations alone account for no more than 18 per cent. of their contents on the average, with a maximum of but 26 per cent. The next largest sections are: economic and social geography, with an average of 17.2 per cent. and a maximum of 25.8 per cent.; general physical geography, with an average of 16.6 per cent. and a maximum of 31.5 per cent.; and anthropology and ethnography, with an average of 7.7 per cent. and a maximum of 14.0 per cent. In other words, mathematical and cartographical geography, general physical geography, anthropology and ethnography, economic and social geography, explorations and systematic regional geography account for 78 per cent. of the contents of these five periodicals, allowing no more than 22 per cent. for the six remaining sections combined.

There is still another test which ought not to be omitted in determining the character of geography as a science: it is the place which it occupies as a subject in the curricula of the universities. The number of courses and of hours assigned to each of the above-mentioned sections will clearly indicate what geography is considered to be by the geographers themselves who claim to be scientists and what importance they attribute to the respective sections. Unfortunately, I have only been able to obtain the announcements of the courses given in German in the universities of Germany, Switzerland and Austria. But, inasmuch as these figures are used only to supplement those above, not for independent conclusions, and as Germany has been the classical country of scientific geography from its very beginnings, this one example may be considered adequate. There were announced for the winter semester of 1911-12 a total of 91 courses in geography, amounting together to 220 hours a week*.

The following table represents the proportion of courses and time devoted to the respective sections:

ANALYSIS, ACCORDING TO SUBJECT, OF GEOGRAPHICAL COURSES OFFERED IN GERMAN IN THE UNIVERSITIES OF GERMANY, AUSTRIA AND SWITZERLAND DURING THE WINTER SEMESTER OF 1911-12.

SUBJECT	COURSES	TIME
Mathematical and Cartographical Geography	14.4%	10.0%
General Physical Geography	17.7	25.0
Vulcanology and Seismology	0.5	0.2
Glaciers	4.4	2.7
Hydrography (Potamography and Limnology)	0.0	0.0
Oceanography	3.3	4.1

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* The actual number of hours and courses is even larger because the "colloquia" and "Übungen," the hours and subjects of which are announced later in the year, could not be included for this reason.

SUBJECT	COURSES	TIME
Meteorology and Climatology; Terrestrial Magnetism....	1.1%	0.9%
Biological Geography	2.2	2.2
Anthropology and Ethnography	7.7	7.7
Economic and Social Geography	12.4	9.5
Explorations	4.4	4.5
Systematic Regional Geography	32.2	33.2

According to these figures, the men who, in Germany, consider geography a science are so far from identifying its contents with exploration and mapping that they assign to these two sections but 18.8 per cent. of their courses and 14.5 per cent. of their time, while to systematic regional geography and general physical geography together, they assign 50 per cent. of their courses and 58 per cent. of their time. To the latter two subjects, in conjunction with anthropo-ethnological and social-economic geography, they devote 70 per cent. of their courses and 75 per cent. of their time, leaving but 12 per cent. of the courses and 10 per cent. of the time to the work of the six remaining sections combined.

It cannot be denied that Colonel Close's estimate of geography differs considerably from that of Continental and American geographers. If in spite of the facts given here he could arrive at the conclusions expressed in his address, the discrepancy must be due to his method of inquiry, and it is his method which we must now examine.

In his evaluation of the purpose and position of geography he was guided by a laudable desire to be impartial. For this reason he refrained from establishing any personal standard of merit and adopted instead what he believed to be the accepted standard of geographers themselves. This policy might have supplied him, indeed, with an excellent foundation if he had not been strangely unfortunate in the choice of his standard. In supposing the classification of the Geneva Congress to represent the various aspects of geography and their relative importance, he overlooked the fact that the programs of international congresses are not arranged for the purpose of establishing ideal classifications of the various branches of knowledge, but rather to furnish a working basis for scientists from all countries in order to establish an international understanding about the work pursued or to be pursued, with special reference to the problems under consideration. It is evident that the schedule of the work of these congresses must vary from one meeting to the other, both in its purpose and content, and that no two such schedules will be alike, as, for instance, reference to the reports of the three last congresses, those of Berlin, of the United States and of Geneva, and to the prospectus of the coming congress at Rome, will show. Moreover, a closer examination of the titles of the papers offered at the various international congresses or of the past volumes of the leading scientific periodicals for any one period discloses another characteristic fact. It is that each congress as well as each periodical has a field of its own, as it were, and that, although striving to do justice to the whole subject as much as possible, there is, in the congresses, a law of historical evolution, and in the periodicals, one of division of labor, which gives to each of them a stamp of its own. At the early international geographical congresses, for instance, the interest in the great discoveries of the times was paramount, but, beginning with that of Berlin, a transition made itself felt which influenced the program to the effect that more time was given to the sifting and examining of the material at hand, and the scholarly side of the science came more and more to the front. Among the periodicals there are some especially favored by explorers for the publication of their original reports, such as *Petermanns Mitteilungen* and the *Geographical Journal.* Others specialize more in economic and social geography, still others in the anthropological and ethnological sides of the subject, and another group prefers to furnish a common meeting ground for the devotees of general physical geography. This is a great advantage, because in our era of specialization no working scientist can keep up with the literature of his entire subject, and he must know where to look first for contributions to his own specialty. But it is obvious that under these conditions statistics founded on the contents of one periodical only cannot but lead to erroneous conclusions, and for this reason I have chosen, not five years of one periodical, but one year each of five, in order to obtain a picture of the actual state of things.

In spite of the essential differences which exist between Colonel Close's tables and my own, there is a partial resemblance between the two groups which ought not to pass unnoticed. It is the conspicuous drop of the figures in Sections 3 to 7 (vulcanology and seismology; glaciers; hydrography, potamography and limnology; oceanography; meteorology and climatology; terrestrial magnetism), and sometimes in Section 8 (biological geography), which proves that these sections are not coordinate with Sections 1, 2, 9, 10, 11, 12 (mathematical and cartographical geography; general physical geography; anthropology and ethnography; economic and social geography; explorations; systematic regional geography). This fact is further proven by the programs of the other international congresses in which the former subjects do not appear as independent sections. This is not doing them injustice, for, however expedient their separate treatment may be, for reasons of practical convenience, they do not cease therefore to be *subdivisions of general geography,* and every paper offered in any one of these sections could with equal propriety have been listed under one of the principal divisions of general physical geography: air, ocean, land.

Colonel Close's criticism of the inclusion of these subjects in geography as indicative of the lack of unity of geography as a science seems peculiarly unappreciative of the close relationship of all branches of modern science. What science is there, with the possible exception of mathematics, that is not nowadays interrelated with one or several other sciences? The times when every branch of knowledge had its territory precisely limited are gone never to return. Those were the times when the contents of the so-called descriptive sciences were lists of names, when the man who knew most plants was the greatest botanist and he who knew the names of the largest number of animals, the greatest zoölogist. In those times the best geographer, too, was he who had the largest number of towns, capes, mountains, rivers, at the tips of his fingers. But modern thought has revolutionized the methods of study and with them the contents of the sciences themselves. In proportion as the scientific spirit spreads specialization increases. Organic and inorganic chemistry, for instance, have almost become separate sciences. In a similar way the scientific pursuit of geography has resulted in the growth of special branches, of which geology itself was the first, with all the other "ologies" following in their turn. Of course, geography remains the "common meeting ground" for the daughter sciences, because it is their mother earth from which they must not depart under penalty of losing the large points of view without which all special work remains fragmentary.

The close relationship of geography to other sciences is further evidenced by the early careers of many prominent geographers. It is a fact that more than one of the leading men in our science, especially among the older generation, was a specialist in some other branch before becoming a geographer. The reason for this was not the non-existence of geography as a science, but the fact that at the time when these men entered upon their scientific work, geography was not yet recognized as such, nor taught at the universities at all. They made their start in science by means of the subjects which were then included in the courses of study; but while their fellow scholars, who were born geologists or biologists or historians, remained faithful to the subjects of their first choice, those who were born geographers proceeded into the region of the unknown and *created* what we now recognize as scientific geography. It goes without saying that the character of the previous studies of those pioneers predetermined to a certain degree what part of geography each would be most fit to originate; those hailing from geology developed the physiographic aspects, those in command of historical or biological methods, the ontographic aspects of the subject. From the moment they had entered upon this work, however, they ceased to be geologists or biologists or historians and became geographers. The geographers of the present generation who began work under their guidance and found geography ready to be taught at the universities were geographers from their very beginnings and were obliged to prove their claim of being scientists by *geographical research.* Their special inclinations and gifts, of course, lead them to choose sometimes one, sometimes another, department of the subject for their special work, and accordingly to combine their studies with mathematics, or geology, or economy, or biology. This is as little a reason for calling them mathematicians, or geologists, or economists, or biologists, as the fact that a sociologist chooses history for his minor subject makes that man a historian. A scientific book on geology will have to refer to physics, chemistry, zoölogy, in ever so many places, and it is not the geologist, but the physicist, chemist, zoölogist, who did the original work on which the geological structure rests; the geologist only uses the results of these fellow scholars as tools for his own work. Yet nobody has ever charged geology with being a *compilation* of physical, chemical, zoölogical matter borrowed from various sources! Why should geography alone, under the same circumstances, be accused of being nothing but a compilation of other sciences?

Moreover, not only are all branches of modern science closely related, but the center of interest in any one science is subject to change periodically and locally. There was a time in zoölogy when invertebrate embryology was the chief claimant of attention, as in our days determination of sex, eugenics and similar problems seem to take the lead. So in geography there was a time when exploration and mapping stood in the foreground. It was the time when, after Humboldt and Ritter had built up their imposing constructions of the earth and its inhabitants, geographers with a modern scientific turn of mind noticed on what imperfect foundations the superstructures were built and realized that the most imperative need for a geography that would be scientific was a more exact knowledge of its object, the earth itself. The name of August Petermann embodies that period. It was the era of the great modern discoveries and the era, too, of the foundation of the great geographical societies whose main purpose was *not* to cultivate pure science, but to interest the public at large in questions of discovery and exploration. For the explorers needed funds to carry out their expeditions, and the means of the societies would increase in proportion to their membership. In the scientific part of the geographical world this rather sensational interest in the subject has now given way to a more scholarly understanding of it, and this changed attitude is reflected in the above mentioned change in the character of the international congresses. Only in the popular conception of geography does exploration still occupy the first place among its various branches.

The fact alone that Colonel Close takes the activities of a geographical society as his main standard for determining the scientific character of geography proves how far he is from appreciating the actual situation. Otherwise he would not place a geographical society, however leading among its class, on a level with mathematical, astronomical, geological and similar societies. The latter are associations of specialists, founded to keep the devotees of their respective sciences in touch with each other and thereby to promote scientific progress. No persons are admitted to membership unless they are doing original work or hold a position which is in itself a guarantee of the scholarship of its occupant, even though he might not be a fecund writer. The proceedings or journals of these societies are the organs for the publication of the work of their members, and their contents are, as a rule, unintelligible to the general public. In the geographical societies, as has been shown above, scholarly interests are but indirectly represented; their size alone proves what a large percentage of non-geographers they include. Of course geographers belong to them as well; they even do most of the work. But in their addresses they must adapt their subjects to the character of their audiences, the majority of which are lay hearers, and therefore most of them prefer to read their purely scientific papers at the meetings of strictly scientific societies.* There is only one such association, to my knowledge, which is a truly scientific geographical society of equal standing with mathematical or geological societies because its membership is limited to professional geographers: The Association of American Geographers. Unfortunately this association has only recently resolved to publish a journal of its own; it is to that journal that we may look some day as an authentic criterion of the scope of geography as a science. But the typical geographical society, whether subsidized by a government or maintained as a private corporation, is not a clear source from which to obtain such information; in its work exploration will always occupy a space quite disproportionate to its rôle in scientific geography, because exploration is that part of geography which appeals most strongly to general and popular audiences. This must in no way be construed as a reproach to geographical societies; they are fulfilling a very useful mission and have certainly done more, in their way, for the general education of the public than strictly scientific societies ever can expect to do; but this is not a reason for selecting their work as the basis for a definition of the scientific character and value of the subject.

The real character and content of scientific geography has been defined so often and so completely by its leading representatives in all countries where it is pursued that anyone not conversant with it need but consult their works in order to familiarize himself with its nature. While differing on minor points they all agree that, in spite of the complexity of the subject, the unifying element is given in the object of study: the surface of the earth, as a whole and in its parts, studied either from the systematic or from the monographic, or regional, point of view. Just as, in zoölogy, an author may write either on general problems (such as the operation of Mendel's Laws), or on questions of systematic importance (such as the question whether *Limulus* belongs to the crustaceans or to the spiders), or may write a monograph on some species (cf. Leuckart's work on *Trichina*), so in geography one may investigate either problems of general geography (such as the location and distribution of volcanoes), or systematic problems (such as the determination of the type, whether fiord or *ria,* to which the Maine coast belongs), or the *ensemble* of a special geographical region (as exemplified by Ratzel's monograph on the United States). There is no reason why the first three problems should be considered scientific while the latter three should not—unless they were treated in an unscientific way, in which case both groups would be equally open to criticism. But what is it that, admitting the constantly increasing complexity of the sciences, determines the special scientific character of any problem, since quite a number of problems may with equal right be classed with several sciences and treated in various text-books? In answering this question we shall never err far from the truth when we remember Professor Davis's principle that "it is the relation into which the object enters that determines its place." When we find zoölogical, geological, economic discussions overlapping upon geographical ground, or vice versa, we know that the subject belongs to geography as soon as it is presented in one of the relations which we claim as purely geographical. *Such relations,* on which all geographers of note agree, *are location and distribution as stimulus of, or response to, existing conditions on the earth's surface*, and they apply to both inorganic and organic bodies. Thus the drowning of the river valleys of New England is a geological fact and the settlement of New England a historical one; but the fact that the harbors formed by the drowned valleys afforded protection to the settlers and that for this reason the original settlements grew up at the heads of these bays, belongs to geography, for it expresses the influence of location on a phenomenon associated with that section of the earth's surface, or the natural law which controls the occurrence of that phenomenon. The person who first establishes such a law and follows its application all over the inhabited part of the globe is *not* compiling geology and history, but is doing "original, definite, and quantitative research" in *geography.*

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* This fact easily explains why, in the work of the Berlin Geographical Society, the percentage of papers on exploration is so much larger among the addresses than among the contributions directly furnished to its journal.

One word more on the subject of distribution. It is true that distribution alone does not constitute geography, and in this respect the explanation given by Professor de Martonne and quoted by Colonel Close is not quite satisfactory. The mere fact that the botanist "seeks to determine its [the plant's] area of extension" does not transform the investigation from a botanical to a geographical one. I cannot do better than again to quote Professor Davis* on this matter when he says that, if geography is so understood, then the distribution of anything might be fit for geographical study. Moreover, such distributional treatment "is apt to take up *one kind* of thing at a time and follow it wherever it is found, thus failing to give account of the natural occurrence of many kinds of things in their actual association which geography demands." Similarly, a map showing the distribution of any chosen specimen or phenomenon is not for the sole element of distribution a geographical map, but remains a part of the science to which its subject belongs.

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*Geographical Essays, No. 1.

What then constitutes the geographical element in distribution? This question, too, has been answered before. ,Says Professor Herbertson of Oxford*: "The recognition of geographical forms has gradually been taking place. It has necessarily been late in the history of thought, first, because our knowledge of the surface of the globe was insufficient until the explorations of the nineteenth century had traced its fundamental features; and, second, because the specialist interpretation of the accumulated data was a necessary preliminary to its utilization for systematic geography.

". . .A period of intense analytical specialization was a necessary preliminary to the more complete synthesis.... Speaking generally, this synthetic work must have been carried far enough to permit of at least rough mapping before the geographer can begin his part of the task. In Berghaus's Physical Atlas, and for meteorology in Bartholomew's volume, we have the raw material for systematic geography. These maps, however, unless it be in the case of configuration, are not drawn from the geographical point of view, but from those of the various specialists who have edited the volumes.

"In what way is the geographer to use this raw material in working out a systematic geography? This involves the question, what is the subject-matter of geography? This I take to be the study of phenomena from the point of view of their distribution on the surface of the earth, *in natural groups, and not as isolated phenomena.*†

"Geography is not concerned with [the] distribution of one element on the earth's surface, but with all. If geographers first regard the distribution of different phenomena separately, it is only in order to help them later to consider them together more effectively. This is not to say that all these different distributions are of equal importance, but that all must be taken into consideration before the problem of systematic geography is solved.... Configuration is necessarily the framework, but we must not think of it merely as a more or less irregular surface; we must see it as part of a solid which comprises not merely the soil beneath, but the air above, with relations to other parts of the earth and also to the influences coming from outside the earth. This gives a movement, a life to the whole, and it seems to me useful and not altogether fanciful to speak of this geographically discerned complex as a macro-organism."

And, in a presidential address to the British Association, Professor Herbertson said: "I wish to lay great stress on the significance of vegetation to the geographer for the purposes of regional classification. I do not wish to employ a biological terminology nor to raise false analogies between the individual organism and the larger units of which it is a part, but I think we should do well to consider what may be called the life or movement going on in our units as well as their form . . . . By vegetation I mean not the flora, the historically related elements, but the vegetable coating, the space related elements. Vegetation in this sense is a geographical phenomenon of fundamental importance. It indicates quality—quality of atmosphere and quality of soil. It is a visible synthesis of the climatic and edaphic elements. Hence the vast lowlands of relatively uniform land features are property divided into regions according to vegetation—tundra, pine forest, deciduous forest, warm evergreen forest, steppe, and scrub. Such differences of vegetation are full of [geographical] significance."

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* "The Major Natural Regions," *Geogr. Journ.*, Vol. 25, 1905, No. 3, p. 301.

† The italics are mine. M. K. G.

Similarly, a map showing the distribution of limestone soils is a geological map, but a map which shows how in the limestone country human habitations are gathered into compact villages around one or more deep wells, while in the bottom lands they spread comfortably along the river, is a geographical map, and what is true of the map is true also of the written word. The ripest product of truly geographic scholarship is therefore the geographical monograph devoted to the study of an individual geographical region, the type of work so well represented in modern French and German geographical literature, and of which England possesses the classical example in Huxley's Thames. If he has not yet found more disciples in this field in England the cause probably is that the Empire has been too busy exploring, surveying and mapping its large territories. But in proportion as the English universities pay more attention to the long-neglected subject of geography, it is to be hoped that this phase of geographical research will be better appreciated by all who are called upon to utter an opinion on this subject.

FURTHER COMMENT

(Extract from "Prof. Hellmann on the Floods of the Oder" [a review] by Hugh Robert Mill, D. Sc., *Geographical Journal,* Vol. 38, No. 6, 1911, pp. 601-602.)

Colonel Close, in his recent address as president of Section E of the British Association, called attention to "the extremely frank way in which vulcanology, seismology, meteorology, climatology, terrestrial magnetism, anthropology, and ethnography are included in geography." He went on to say that the papers "on meteorology and climatology" which had been read before the Royal Geographical Society during the last five years might have been read with perfect appropriateness before the Meteorological Society and made the suggestion that the authors who send such papers to the *Geographical Journal,* instead of sending them to the *Journal of the Royal Meteorological Society,* "in so doing appeal rather to the public at large than to men of their own special sciences." If this